

INFORMATION LETTER

Not for
Publication

NATIONAL CANNERS ASSOCIATION

For Members
Only

No. 738

Washington, D. C.

April 15, 1939

PROGRESS ON NORTON BILL

House Committee to End Consideration Next Week —White House Attitude

Following a White House luncheon on Thursday, Administrator Andrews stated that the President had endorsed the Norton amendments (H. R. 5435) to the wage and hour law and had expressed the hope that the bill would be quickly enacted without change.

Earlier in the day, at the conclusion of a meeting of the House Labor Committee, Chairman Norton announced that with the exception of the agricultural and "area of production" amendments, the committee had finished reading the bill and was practically in agreement. The committee, Mrs. Norton said, would consider the agricultural and "area of production" amendments again on Monday, April 17. She said she believed the committee would be able to report the bill by the end of the week.

Chairman Norton also stated that unless the House Rules Committee granted her bill a "closed rule" that would preclude the submission of amendments on the floor, there would be no bill.

On the preceding day, Representative Pace of Georgia appeared before the committee and urged that "area of production" be defined to include farms within 75 miles of processing plants. Representative Ramspeck, also of Georgia and the ranking member of the committee, has expressed the opinion that an arbitrary number of miles be written into the law to define "area of production." Mr. Ramspeck, however, has not indicated where the arbitrary line should be drawn.

A resolution introduced by Representative Wood of Missouri on Tuesday would establish in the Bureau of Labor Statistics of the United States Department of Labor a Division of Labor Productivity. It would be the duty of the division to make continuing studies of productivity and labor costs in the manufacturing, mining, transportation, distribution, and other industries. A similar resolution has been introduced in the Senate by Senator Wagner.

According to a bill introduced on April 11 by Senator Capper of Kansas, a Division of Cooperatives would be created within the Department of Agriculture. The functions of the division would be to conduct research in cooperative problems and to furnish advisory service to cooperatives. The work of the Division of Consumers' Council of the Agricultural Adjustment Administration, and the Cooperative Division of the Farm Credit Administration with respect to research in cooperative problems and the furnishing of advisory service to cooperatives, would be transferred to the proposed new division.

Senator Andrews and Representative Caldwell of Florida have introduced bills which would make the funds of the Federal Surplus Commodities Corporation available for the purchase of fish and shellfish products.

Delegate Dimond of Alaska introduced on Wednesday a resolution which would authorize the House Committee on Merchant Marine and Fisheries

"to make an investigation of the fisheries of Alaska with special reference to (a) the use of traps in the catching and taking of salmon in the waters of Alaska, whether or not the use of traps should be prohibited for that purpose, and if prohibited the mode and manner and time thereof; (b) the advisability of maintaining or changing the season prescribed at the present time for the catching and taking of salmon in the several fishing areas or regions in Alaska; (c) the effect of fishing for and taking of herring, as at present operated, upon the salmon fishery and particularly that part carried on by trolling, and whether or not the taking of herring for conversion into oil and meal in any part of Alaska should be further restricted or entirely prohibited; (d) the offshore fishing by foreign nationals for both crabs and salmon; and (e) any other matters concerning the fisheries of Alaska which the committee or the subcommittee may think it desirable to investigate with a view to the conservation and preservation of the fishery and a reasonable development of the Alaska fishing industry."

The Senate passed on Thursday a bill (S. 1096) to amend the Marketing Agreements Act to make its provisions applicable to Pacific Northwest boxed apples. The bill now goes to the House.

LEA INTRODUCES NEW BILL

Would Postpone Effective Date of Certain Labeling Provisions of Food-Drug Law

On April 13, Representative Lea, Chairman of the House Committee on Interstate and Foreign Commerce, introduced H. R. 5762, a new proposal to postpone the effective date of certain provisions of the Federal Food, Drug, and Cosmetic Act, which otherwise become effective on June 25, 1939.

The first section of the bill would postpone until January 1, 1940, Section 402 (c) requiring that imitation foods be prominently labeled "imitation", Section 403 (e) (1) requiring a statement of the name and place of business of the packer or distributor, Section 403 (i) requiring disclosure of ingredients in the case of any food for which a standard of identity has not been prescribed, Section 403 (j) authorizing the issuance of label regulations for special dietary foods, and certain drug and cosmetic sections.

The second section postpones the effective date of any regulations prescribing a standard of identity, quality, or fill of container until January 1, 1940, except that any standard of identity, quality, or fill of container promulgated to replace an existing McNary-Mapes standard of quality and/or fill of container shall become effective on June 25, 1939.

With respect to canned foods, the effect of these first two provisions would be to postpone required disclosure of ingredients in the case of fabricated canned foods, or canned foods for which there is no existing McNary-Mapes standard

of quality. But the bill would still require that the label on any canned food for which there is an existing McNary-Mapes standard and for which new standards of identity, quality, and fill of container are promulgated, comply fully with the new regulations after June 25, 1939. In short, this bill would still require possible extensive label revision for the bulk of canned foods on and after June 25, 1939, but would exempt all other foods until January 1, 1940.

A further provision would authorize the Secretary to exempt from the labeling requirements until July 1, 1940, any containers on which the labeling material had been lithographed, etched, or fused, prior to February 1, 1939.

Discussion of Corn Sugar Deferred to May 1

Public hearings on proposed standards of identity, quality, and fill of container for canned peaches, apricots, pears, and cherries, under the new Food and Drug Act, which began in Washington on Monday, April 10, immediately brought to light a controversy concerning the permissible use of dextrose and corn syrup as a sweetening agent in the packing medium for such fruits. In the very first hearing, concerning a proposed standard of identity for canned peaches, the question was raised whether the term "sugar" in the specification of a "water solution of sugar" included the use merely of cane or beet sugar or also permitted the use of dextrose, corn syrup and possibly other sweetening agents. A large number of experts and a considerable number of canners appeared and testified concerning the use of dextrose in the canning of peaches.

Evidence on this single issue occupied practically two and one-half days of the hearing on the standard of identity for canned peaches, and a portion of the hearing on the standard of quality for canned peaches.

At the conclusion of the testimony on the use of corn sugar, representatives of the cane and beet sugar interests requested an opportunity to present evidence. In order to permit the hearings on canned fruits to go forward, it was ordered that the question of the use of "sugar" in the packing medium on each fruit would be postponed for further public hearing on May 1, 1939. It is expected that the same issue in connection with the hearing on proposed standards for canned peas, to begin on April 17, will be reserved for consideration on May 1.

New State Food and Drug Legislation

New State food and drug laws have become effective in Nevada and North Carolina, and an Agricultural Products Act, dealing with adulteration and labeling of food products, will become effective in West Virginia on June 2, 1939.

The Nevada Food, Drug, and Cosmetic Act, approved March 27, 1939, and effective immediately, differs from the Federal law chiefly in the fact that no provision is made for standards of identity, quality, or fill of container; articles may be quarantined indefinitely by State officials, no exemption from penal prosecution is afforded to dealers through the giving of proper guarantees by the manufacturer; no provision is made for the shipment of unlabeled canned foods to be reprocessed, labeled, or repacked in other establishments, and no emergency permit control section is included. The

commissioner, however, is authorized to make the regulations promulgated under the Act conform insofar as practicable with those promulgated under the Federal Act.

The North Carolina Act, ratified April 3, 1939, and effective in part on that day and in part on January 1, 1940, complies more nearly with the recommendations of the Association for State food and drug legislation than does that of Nevada. (See Association's letter and bulletin of February 21.) In this bill, the Board of Agriculture is authorized to establish definitions and standards of identity, and a single minimum standard of quality for food products. No grade labeling is authorized, and the Board of Agriculture is directed to have the standards conform insofar as practicable to the definitions and standards issued by the Secretary of Agriculture. No time limit is placed on the retention by State officials of goods seized under this Act; the guarantee provision is unnecessarily strict in that it requires that the guarantee be signed by a person residing within the State of North Carolina; and no provision is made in this law for the shipment of unlabeled goods to be reprocessed, labeled, or repacked in other establishments.

The West Virginia Agricultural Products Act, while it contains provisions relating to the adulteration and misbranding of food products, differs substantially from the food and drug laws that have been adopted in other States and from the Federal Act. The power given to the commissioner of agriculture to establish grades and standards is not at all clear, and it is possible that grade labeling may be authorized. The statute directs the commissioner to periodically prepare and distribute bulletins containing "the official grades, classifications, and standards for agricultural products" (agricultural products would include canned foods under the definition in the Act). The extent of the commissioner's authority under this provision is not clear. The provisions of the Act prohibiting the sale of adulterated or misbranded food follow generally the provisions of the Federal Act.

Food Import-Export Regulations Promulgated

Regulations governing imports and exports of foods, drugs, devices, or cosmetics have been prescribed and promulgated under the new Food, Drug, and Cosmetic Act. They are to go into effect June 25, 1939. As noted in the INFORMATION LETTER of August 27, 1938, p. 5606, regulations in force under the Food and Drug Act of 1906 will apply until June 25, except for certain sections which go into effect immediately. The new regulations repeal inconsistent sections of the present regulations.

Regional Laboratories to Study 12 Products

The 12 farm commodities which are to receive first attention by the four Regional Research Laboratories that the Department of Agriculture is establishing in New Orleans, La.; Peoria, Ill.; Wyndmoor, Pa.; and Albany, Calif., to search for new and wider industrial outlets for farm products, have been specified in a report to Congress. These 12 commodities are: Southern Laboratory—cotton, sweet potatoes, and peanuts; Northern Laboratory—corn, wheat, and agricultural wastes; Eastern Laboratory—tobacco, apples, potatoes, vege-

tables, and milk products; Western Laboratory—fruits, potatoes, vegetables, wheat, and alfalfa.

In addition to outlining future work, the report summarizes in broad terms the findings of the survey of present research. The report contains sections on 74 farm commodities, besides several on common constituents like starch, sugars, protein, and cellulose, and others on processes like fermentation, or on uses like motor fuel.

Fruit and Vegetable Market Competition

Carlot shipments as reported by the Bureau of Agricultural Economics, Department of Agriculture

VEGETABLES	Week ending—			Season total to—	
	April 8, 1938	April 8, 1939	April 1, 1939	April 8, 1938	April 1, 1939
Beans, snap and lima.....	388	159	181	5,189	4,384
Tomatoes.....	1,108	607	605	9,846	8,005
Green peas.....	91	86	39	1,360	1,663
Spinach.....	268	245	181	5,876	5,207
Others:					
Domestic, competing directly.....	4,475	3,922	4,247	116,932	109,909
Imports competing—					
Directly.....	24	16	23	783	540
Indirectly.....	27	41	49	2,298	2,188
Fruits					
Citrus, domestic.....	4,385	4,213	4,409	94,126	105,714
Imports.....	0	0	0	107	77
Others, domestic.....	452	514	344	20,422	19,721

Stocks and Shipments of Pitted Red Cherries

Total stocks of pitted red cherries on April 1, 1939, amounted to 285,302 actual cases, compared with 563,934 cases on April 1, 1938, according to figures compiled by the Association's Division of Statistics. Shipments from July 1 to April 1 for the two years were: 1937-38—No. 2's, 806,143 cases; No. 10's, 966,558 cases. 1938-39—No. 2's, 832,238 cases; No. 10's, 738,237 cases.

In the table below are shown stocks on April 1, together with shipments during March, by regions and can sizes. The report of stocks of cherries is based on 98.5 per cent of the 1938 pack, together with estimates for the 1.5 per cent not reporting.

	No. 2	No. 10	Misc.	Total
Cases	Cases	Cases	Cases	Cases
New York and Pennsylvania:				
Stocks: Sold not shipped.....	3,451	6,534	95	10,080
Stocks: Unsold.....	1,206	8,863	19	10,088
Stocks: Total.....	4,657	15,397	114	20,168
Shipments for March.....	6,044	8,675	1,387	16,106
Michigan, Wisconsin, and Ohio:				
Stocks: Sold not shipped.....	10,637	33,190	.....	43,827
Stocks: Unsold.....	21,853	122,220	1,737	145,810
Stocks: Total.....	32,490	155,410	1,737	189,637
Shipments for March.....	33,380	47,536	200	81,116
Western States:				
Stocks: Sold not shipped.....	3,376	23,434	50	26,860
Stocks: Unsold.....	553	46,796	1,288	48,637
Stocks: Total.....	3,929	70,230	1,338	75,497
Shipments for March.....	5,250	22,525	1,434	29,209
Total United States:				
Stocks: Sold not shipped.....	17,464	63,158	145	80,767
Stocks: Unsold.....	23,612	177,879	3,044	204,535
Stocks: Total.....	41,076	241,037	3,189	285,302
Shipments for March.....	44,674	78,736	3,021	126,431

Vegetable Pack Statistics Published

Copies of the annual bulletin of the Association's Division of Statistics giving the pack of principal vegetables during

1938 have been mailed to members of the Association. Statistics on the 1938 pack of fruits will be published as soon as figures are compiled.

Fruits and Vegetables in Cold Storage

Stocks of frozen fruits, reported as in cold storage April 1, 1939, were reduced by 12,057,000 pounds, and frozen vegetables by 4,495,000 pounds, during March, according to the Bureau of Agricultural Economics. In the following table are given figures on cold-storage stocks of frozen fruits, segregated by method of process, as of March and April 1, 1939:

FRUITS	Quick freeze		Cold packed	
	March 1, 1939 1,000 pounds	April 1, 1939 1,000 pounds	March 1, 1939 1,000 pounds	April 1, 1939 1,000 pounds
Blackberries.....	294	180	1,705	1,544
Blueberries.....	1,319	1,089	3,512	3,617
Cherries.....	2,140	1,761	13,482	11,306
Logan and similar berries.....	695	450	2,061	1,908
Raspberries.....	1,192	894	5,553	4,968
Strawberries.....	10,450	9,437	18,935	16,294
Other fruits.....	5,935	5,553	13,172	14,145
Classification not reported.....	4,478	4,810	18,190	13,100
Total.....	26,503	24,174	76,610	66,882

In the following table are given comparison of stocks of frozen vegetables on various dates:

VEGETABLES, FROZEN	April 1, 1938 1,000 pounds	March 1, 1939 1,000 pounds	April 1, 1939 1,000 pounds
	1,000 pounds	1,000 pounds	1,000 pounds
Asparagus.....	.....	2,824	2,553
Beans, lima.....	4,133	11,554	10,311
Beans, snap.....	1,734	5,080	4,872
Broccoli, green.....	.....	1,181	1,080
Corn, sweet.....	1,957	5,845	5,429
Peas, green.....	7,606	18,845	17,140
Spinach.....	2,012	2,848	2,787
Other vegetables.....	6,427	2,586	2,027
Classification not reported.....	.....	5,019	5,088
Total.....	23,869	55,782	51,287

Canning Firms Admitted to Membership

The following canning firms have been admitted to membership in the National Canners Association since January 7, 1939:

Algiers Canning Co., Algiers, La.
 Blue Water Canning Co., Aberdeen, Wash.
 Bricelyn Coop. Canning Assn., Bricelyn, Minn.
 Carmel Canning Co., San Francisco
 Creole Food Co., Gulfport, Miss.
 Cummins Canning Co., Conneaut, Ohio
 Diegel Canning Co., Wapakoneta, Ohio.
 Humphreys Canning Co., Westwego, La.
 Jamestown Canning Co., Wilmington, Ohio
 H. E. Kelley, New Church, Va.
 Marine Foods Co., Inc., Bay St. Louis, Miss.
 Nunez & Webber, Cordova, Alaska
 Quality Food Products Co., Bradford, Ohio
 Quality Sea Foods, Inc., Biloxi, Miss.
 Richland Canning Co., Fayetteville, Ark.
 St. Croix Canning Corp., Hollansburg, Ohio
 E. A. Silzle Corp., Los Angeles
 White House Canneries, Inc., Peoria, Ill.

UNSOLD STOCKS OF CANNED SALMON ON MARCH 31

Unsold stocks of canned salmon on March 31, 1939, totaled 1,324,362 cases, as compared with 2,032,591 cases on February 28, 1939, according to statistics compiled by the Association of Pacific Fisheries. These figures represent the combined reports of 79 companies, who packed 98 per cent of the 1938 pack. No reports were issued for March, April, and May, 1938, so the usual comparison with the corresponding month of 1938 cannot be given. The following table gives statistics of canned salmon stocks for March and February, 1939, by grades or varieties and by can sizes:

GRADES OR VARIETIES	Talls	Flats	Halves	Total	Total
	(1 Pound)	(1 Pound)	(8 Dozen)	Mar. 31, 1939	Feb. 28, 1939
Chinooks or Kings:	Cases	Cases	Cases	Cases	Cases
Fancy Red.....	10,131	11,782	24,065	45,978	50,328
Standard.....	2,458	2,842	7,283	12,583	13,802
Pale.....	1,163	162	147	1,472	1,655
White.....	.....	57	290	347	430
Puget Sound Sockeyes.....	.....	4,360	63,605	67,965	64,843
Alaska Reds.....	783,682	27,686	2,441	813,809	1,083,701
Cohoos, Silvers, Medium Reds.....	61,374	5,274	19,629	86,277	101,395
Pinks.....	240,316	3,198	1,831	245,345	573,784
Chums.....	46,974	38	1,254	48,266	140,218
Bluebacks.....	.....	.....	1,296	1,296	1,296
Steelheads.....	.....	.....	426	1,024	1,139
Totals.....	1,146,098	55,997	122,267	1,324,362	2,032,591

SWEET CORN FOR MANUFACTURE

Reports on Tentative Acreage Plans Compiled by Bureau of Agricultural Economics

Reports to the Bureau of Agricultural Economics from canners and processors of sweet corn, giving their tentative 1939 acreage plans, indicate the industry is planning to reduce this year's plantings about 26 per cent below the plantings of 1938. In the analysis of the current situation, the Bureau pointed out in a news release of April 10, that, allowing for average abandonment of acreage and average yields per acre in 1939, this reduction of 26 per cent would result in a supply of canned corn about sufficient for average consumption requirements and would leave carry-over at the end of the 1939-40 marketing season about in line with normal.

If these early season acreage plans for sweet corn are carried out, the acreage planted for manufacture in the United States will total about 266,500 acres compared with 358,570 acres planted in 1938, and with the record-high of 461,850 acres planted in 1937. Substantial decreases in acreage are indicated in each geographical region. This report is not an estimate of actual plantings, but is an interpretation of canners' plans as reported to the Bureau in late March.

Abandonment of planted acreage because of unfavorable growing conditions has averaged about 6 per cent annually during the past nine seasons, 1930 to 1938. If this average loss of planted acreage is assumed for 1939, a planting of 266,500 acres will result in about 250,000 acres for harvest.

The 10-year (1929-38) average yield of sweet corn for manufacture is 2.05 tons per acre. If yields in line with this average are obtained in 1939, the 250,000 acres indicated for harvest would produce about 512,500 tons for canning and freezing.

Average pack-out per ton would permit a 1939 pack of 12,000,000 to 12,500,000 standard cases of canned corn from a crop of 512,500 tons of sweet corn. This would be 8,000,000 cases smaller than the 1938 pack and only slightly more than

half the 1937 pack of 23,500,000 cases of 24 No. 2 cans. With a near-record carry-in of 8,000,000 cases now indicated for August 1, 1939, a total supply of 20,000,000 to 20,500,000 cases would be available for the 1939-40 marketing season.

Supplies for the past 5 seasons have averaged 20,000,000 cases and for the past 10 seasons 19,000,000 cases. The 25,000,000-case supply for the present season (1938-39) was the largest on record, but movement from canners' hands has not been as rapid as during the two other recent seasons of unusually heavy supplies (1935-36 and 1937-38). With a supply 800,000 cases above 1937-38, the shipments for 7 months ending March 1, 1939, were 3,400,000 cases below those for the same period last season, leaving total stocks (sold and unsold) in canners' hands about 4,000,000 cases above those on the same date in 1938. As the 1937-38 carry-out was 4,600,000 cases, normal movement for the balance of the season would leave August 1 stocks this year of approximately 8,000,000 cases. This would indicate shipments of 17,100,000 cases for the 1938-39 season.

Shipments by canners in the past have been above 17,000,000 in only 4 years, 1925-26, 18,700,000; 1929-30, 17,500,000; 1935-36, 20,800,000; and 1937-38, 19,700,000 standard cases. It is therefore probable that a supply for the 1939-40 season of 20,000,000 to 20,500,000 cases would be sufficient for normal shipments and an adequate carry-out at the end of July 1940.

In the table below are given figures by regions on planted acreages of sweet corn during the past three years, the 1939 indicated acreage, and the per cent this 1939 indicated acreage is of 1938 planted acreage:

Region	1936	Planted	1938	Intended in 1939	
	Acrea	1937	Acrea	Indicated	% of 1938
Northeast.....	52,570	56,200	48,080	31,620	65.8
Middle Atlantic.....	40,050	48,200	39,220	29,100	74.2
Middle West.....	340,860	340,200	284,600	192,700	75.7
West.....	4,100	5,800	6,400	5,700	89.1
Other States.....	6,140	8,450	10,270	7,400	72.0
Total.....	443,720	461,850	358,570	266,520	74.3

PROSPECTS FOR CANNED CORN FOR 1939

Factors Involved in Cannery Planning for this Year's Planted Acreage

The current report issued by the Bureau of Agricultural Economics on intended acreage of sweet corn for manufacture, gives a summary of the production and consumption of canned sweet corn for recent years, together with a report of the acreage intended for 1939. The problem of adjusting production to the anticipated demand is somewhat more difficult to solve this year than usual. There are certain facts that appear to be outstanding.

First, the industry is faced with a carry-over that may be unusually large. Low prices have prevailed throughout the current year. Canned corn has had to meet severe competition from large supplies of other canned vegetables. According to the Bureau of Agricultural Economics' report of intentions to plant, corn canners have expressed their intentions of attacking this problem by reducing their acreage 26 per cent below their 1938 plantings. What can be expected from these tentative plans to reduce acreage? Certain facts and figures are being presented below that may be of some assistance to corn canners in answering the above question.

Year	Planted acreage		Harvested acreage	
	Intentions	Change from intended	Acres	Change from planted
1934.....	276,110	323,500	+17	287,630
1935.....	354,430	418,900	+15	401,610
1936.....	431,090	443,720	+3	372,420
1937.....	450,720	461,850	+3	438,810
1938.....	368,270	356,970	-3	341,460
1939.....	266,520	.....	.....	.....

Will the planted acreage be more or less than the 266,520 acres indicated by the Bureau's report? The record for the last five years' plantings is shown in the preceding table. It should be noted that for each of the four years, 1934 to 1937, the planted acreage was larger than the intentions, but in 1938 it was smaller. For each of the first four years, however, the planted acreage represented an increase over the previous year, whereas for 1938 planted acreage was reduced. In other words, the record shows that when canners are increasing their acreage, there has been a tendency for the planted acreage to be somewhat larger than the Bureau's report of intentions, but the reverse has been true when acreage was declining.

Year	Planted	Harvested	Yields per acre		Actual pack	Expected pack
	Acres	Acres	Tons	Cases	Cases	Cases
1933.....	208,400	199,670	1.97	51.0	10,192,730	9,835,646
1934.....	323,590	287,630	1.73	39.2	11,267,897	15,272,164
1935.....	418,990	401,610	2.14	53.5	21,471,417	19,774,662
1936.....	423,770	371,520	1.63	39.4	14,622,450	20,000,228
1937.....	463,442	438,960	2.21	53.6	23,541,224	21,872,027
1938.....	346,432	339,050	2.59	60.3	20,469,518	16,350,182

If the canners' intentions are carried out and the planted acreage is approximately 266,000 acres, what pack might reasonably be expected? The preceding table shows the acreage and yields of sweet corn, together with the actual pack and the pack that should have been expected for 1937 and 1938. The expected pack was calculated by applying an average of 8 per cent abandonment to the planted acreage to secure anticipated harvested acreage which was multiplied by the average yield in cases per acre. The average used was 51.3 cases. The five-year period (1933-1937), used to calculate

this average, included two years when abandonment was unusually large and yields low because of drought conditions. Consequently the average used may be slightly smaller than that which might reasonably be expected.

Year	Wholesale price canned corn* Per dozen	Planted acreage change from previous year Per cent	Pack change from previous year Per cent	Yield deviation from average ^b Per cent
1933.....	\$0.57	+25.0	+8.9	-6
1934.....	.76	+55.3	+10.5	-23.6
1935.....	1.00	+29.5	+90.6	+4.3
1936.....	.69	+1.1	-31.9	-23.2
1937.....	.66	+9.4	+61.0	+4.5
1938.....	.68	-25.2	-13.0	+17.5
1939.....	(.60)	.....	.....	.....

* Price is for year ending July 31 of each year shown.

^b Average yield in cases per acre for the period 1920-1934 used as the base.

Year	U. S. average				
	Maine Per cent	New York Per cent	Illinois Per cent	Minnesota Per cent	Per cent
1933.....	+6	-11	-24	+26	-6
1934.....	+13	+28	-33	-26	-18
1935.....	+6	+33	+5	+0	+2
1936.....	+22	-11	-29	-35	-22
1937.....	+9	+6	+5	+9	+5
1938.....	+44	+83	+29	+35	+23

Average yield in tons per acre (in husk) for the period 1925-1934 used as the base.

The question of what average yield to use when calculating the expected pack presents the question of variation in yields due to weather conditions. These variations in yields frequently complicate the problem of adjusting acreage to secure a desired pack. The preceding table showing planted acreage change from the previous year together with the pack change from the previous year, illustrates the fact that a given change in acreage very seldom results in a corresponding change in the size of the pack. The explanation is given in the last column of this table, which shows the fluctuation in yields. Last year, for example, planted acreage was reduced about 25 per cent but the pack which was realized was only 13 per cent under that of the previous year. The explanation is that yields last year were 17.5 per cent above average.

The yields which may be expected this year will depend upon growing conditions. Experience of 25 or 30 years indicates that the rainfall and temperature of July and August are factors which determine very largely the size of the yield. The Division of Statistics expects to keep the corn canners informed throughout the 1939 growing season regarding the effect of rainfall and temperature on probable yields in the various districts. It might be of interest, however, to note how yields have varied in four of the large corn-canning States for the last six years. It should be noted that during this six-year period, the fluctuation in yields has been larger in some of these States than in others. This period may not be sufficiently long, however, for one to conclude that yields are more stable in one State than in another.

Each canner's problem involves primarily the varieties that he is canning. Because of the direct competition of these varieties with other varieties and styles of pack, he is of course interested in a total of all varieties. In order that the statistical picture may be completed, however, the record of carryover, pack, and shipments of each variety for 1937-38, and for 1938-39 to April 1, is shown in the following tables. Owing to the fact that the merchandising problem this year has been different in many respects from that of

former years, some canners may wish to see the record of movement of earlier years. Those production and distribution statistics may be found by referring to the bulletin entitled "Production and Distribution Statistics" issued by the Division of Statistics, National Canners Association, in January 1938.

	Evergreen		Narrow Grain		Country Gentleman		Crosby	
	Cream style		Cream style		Cream style		Cream style	
	1937	1938	1937	1938	1937	1938	1937	1938
	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases
Carryover....	108	784	112	236	107	638	72	68
Pack.....	3,860	3,061	2,578	1,335	2,953	2,717	315	233
Total supply..	3,968	3,845	2,690	1,571	3,060	3,375	387	301
Shipments:								
Aug.-Sept..	789	672	1,213	50	417	455	16	29
October....	512	109	266	110	578	165	80	40
November..	263	365	255	67	77	76	70	17
December..	293	273	110	60	151	105	27	7
January....	134	120	30	133	322	167	20	21
February...	227	128	10	166	122	311	25	20
March.....	74	345	125	37	181	246	30	24
April.....	350	.....	113	.....	107	.....	17	.....
May.....	120	.....	192	.....	127	.....	9	.....
June.....	194	.....	89	.....	135	.....	9	.....
July.....	228	.....	46	.....	93	.....	16	.....
Total	3,184	.....	2,449	.....	2,402	.....	319	.....
Years beginning August 1.								

	Bantam and yellow		Bantam and yellow		All white varieties		Total all canned	
	Cream style		Whole grain		Whole grain		Sweet corn	
	1937	1938	1937	1938	1937	1938	1937	1938
	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases
Carryover....	298	1,646	40	1,192	41	225	778	4,809
Pack.....	7,494	7,624	5,668	4,718	1,460	1,139	24,323	20,847
Total supply..	7,792	9,270	5,708	5,910	1,501	1,364	25,101	25,655
Shipments:								
Aug.-Sept..	1,374	1,904	1,524	898	314	234	5,647	4,242
October....	1,263	900	455	423	249	114	3,403	1,461
November..	480	291	256	419	105	130	1,515	1,364
December..	319	133	288	327	98	112	1,286	1,030
January....	486	516	335	332	55	45	1,382	1,335
February...	493	434	266	428	146	95	1,289	1,581
March.....	558	696	380	533	75	88	1,423	1,969
April.....	241	.....	292	.....	90	.....	1,300	.....
May.....	340	.....	240	.....	63	.....	1,091	.....
June.....	319	.....	306	.....	74	.....	1,126	.....
July.....	264	.....	174	.....	7	.....	830	.....
Total	6,146	.....	4,516	.....	1,276	.....	20,292	.....
Years beginning August 1.								

For those who are interested in a comparative record of acreage, yields, and pack by States, the following table is provided, giving those figures for 1937 and 1938. Data for earlier years may be found in the bulletin referred to above.

	Planted	Harvested	Yields per acre	Actual pack	Expected pack
	Acres	Acres	Tons	1,000 cases	1,000 cases
				24/8	24/8
Me., N. H., Vt.:					
1937.....	21,100	20,250	3.4	101.4	2,054
1938.....	14,880	14,610	4.5	130.1	1,901
New York:					
1937.....	25,600	22,000	1.8	50.3	1,136
1938.....	23,500	22,000	3.0	85.1	1,871
Md. and Del.:					
1937.....	42,400	41,800	2.2	59.5	2,486
1938.....	36,600	36,500	2.5	63.2	2,308
Pennsylvania:					
1937.....	9,800	9,500	2.0	70.6	670
1938.....	9,700	9,200	2.1	83.5	492
Ohio:					
1937.....	25,000	22,200	1.9	53.4	1,184
1938.....	22,500	21,800	2.1	85.6	1,212

	Planted	Harvested	Yields per acre	Actual pack	Expected pack
	Acres	Acres	Tons	1,000 cases	1,000 cases
				24/8	24/8
Indiana:					
1937.....	53,000	51,400	2.1	43.4	2,231
1938.....	42,900	42,400	1.7	30.7	1,681
Illinois:					
1937.....	90,300	89,100	2.4	53.6	4,771
1938.....	56,900	56,300	2.6	51.7	2,912
Wisconsin:					
1937.....	34,500	30,700	1.7	37.1	1,138
1938.....	29,000	26,200	2.2	56.8	1,488
Minnesota:					
1937.....	76,700	72,100	2.4	51.9	3,740
1938.....	59,300	55,100	3.1	58.6	3,227
Iowa and Nebr.:					
1937.....	50,600	57,500	2.0	53.1	3,054
1938.....	37,500	35,000	2.5	63.7	2,229

Stocks and Shipments of Canned Sweet Corn

Stocks of canned sweet corn on April 1, 1939, amounted to 12,676,255 actual cases, compared with 14,644,842 cases on March 1, 1939, and 9,155,560 cases on April 1, 1938, according to figures compiled by the Association's Division of Statistics. Of the total stocks in canners' hands on April 1, 1939, 2,713,887 cases were sold but not shipped, and 9,962,368 cases were unsold.

Shipments during March, 1939, amounted to 1,968,587 cases, compared with 1,423,778 cases during March, 1938. Shipments during the eight months, August 1, 1938, to April 1, 1939, totaled 12,979,995 cases, compared with 15,945,231 cases during the corresponding months of the preceding year.

The report of April 1, 1939 stocks is based on reports from canners packing 85 per cent of the 1938 corn pack, together with estimates for the 15 per cent not reported.

Stocks of corn on the cob on April 1, 1939, totaled 153,956 cases, with Eastern States holding 19,639 cases, and Western States having 134,317 cases. Unsold stocks amounted to 96,195 cases, and March shipments totaled 60,212 cases.

In the following table are shown stocks of canned corn in Eastern and Western canners' hands on April 1, 1939, by varieties:

	EASTERN STATES		WESTERN STATES	
	Sold	Unsold	Total	
	Cases	Cases	Cases	
Cream style:				
Evergreen.....	76,812	661,311	738,123	
Narrow Grain.....	125,087	329,774	454,861	
Country Gentleman.....	63,325	138,348	201,671	
Crosby.....	33,444	29,637	63,101	
Bantam Yellow.....	278,364	1,618,268	1,896,632	
Whole grain:				
Bantam Yellow.....	64,492	439,355	503,847	
White.....	13,936	265,167	279,123	
Total.....	655,480	3,508,678	4,164,358	
Cream style:				
Evergreen.....	180,962	884,211	1,065,173	
Narrow Grain.....	74,040	308,101	472,141	
Country Gentleman.....	327,173	1,321,819	1,648,992	
Crosby.....	31,648	47,923	79,571	
Bantam Yellow.....	884,014	2,019,754	2,903,768	
Whole grain:				
Bantam Yellow.....	462,102	1,553,172	2,015,274	
White.....	68,468	228,510	296,978	
Total.....	2,038,407	6,453,460	8,511,897	

GREEN AND WAX BEANS

Intended 1939 Acreage Indicated by Reports to Bureau of Agricultural Economics

A reduction of about 30 per cent from the acreage planted to snap beans for manufacture in 1938 is indicated for 1939 in reports received by the Bureau of Agricultural Economics from processors giving information on the acreage they intend to contract or plant this year. The Bureau pointed out in a news release on April 10, that allowing for average abandonment of plantings and average yields per acre, this reduction of 30 per cent would result in a pack about sufficient for prospective consumption requirements and leave a normal carry-over at the end of the 1939-40 marketing season.

Should these early season acreage plans be carried out, the 1939 plantings in the United States would be about 51,400 acres. Plantings in 1938 totaled 73,280 acres. This report is not an estimate of actual plantings, but is an interpretation of canners' plans as reported to the Bureau late in March.

If abandonment of planted acreage is equal to the average of the last 9 years (5.8 per cent) the indicated planting of 51,400 acres would result in 48,400 acres for harvest. A yield of 1.5 tons of snap beans, the average for the last 10 years, would result in a production of 72,600 tons.

A production of 72,600 tons would provide a pack of approximately 6,500,000 standard cases of 24 No. 2 cans. Carry-in on August 1 seems likely to be considerably heavier than normal—about 2,500,000 standard cases for green and wax beans combined. Therefore, a total supply of 9,000,000 cases probably would be available for the 1939-40 marketing season.

Total shipments by canners in the 1937-38 season were slightly less than 9,400,000 cases, and are likely to be some 9,200,000 cases in 1938-39. For the years 1931-32 to 1936-37, the maximum annual shipments were 7,400,000 cases in 1935-36. A supply of 9,000,000 cases for the 1939-40 season would appear to be adequate for consumers' requirements and leave a normal carry-out at the end of the season.

The estimate of probable carry-over on August 1, 1939, is based upon the latest data available on stocks, those of January 1, 1939, when canners held (sold and unsold) 5,400,000 actual cases, or about 5,700,000 standard cases. With a 1938-39 supply 1,600,000 cases above that of 1937-38, the shipments to January 1, 1939 were 300,000 lower than in the previous season, leaving about 1,900,000 cases in canners' hands in excess of stocks on January 1, 1938. Carry-out last season was 700,000 cases, the Bureau said. On the basis of these figures, stocks on August 1, 1939 probably will be around 2,500,000 cases.

In the table below are given figures by regions on planted acreages of green and wax beans during the past three years, the 1939 indicated acreage, and the per cent this 1939 indicated acreage is of 1938 planted acreage:

Region	1936			Intended in 1939		
	Acrea	Acrea	Acrea	Acrea	Per cent	% of 1938
New England.....	11,700	12,940	13,670	8,330	60.9	
Middle Atlantic.....	11,400	11,900	14,100	10,450	74.1	
Middle West.....	13,300	15,400	17,000	12,900	75.0	
South.....	7,800	10,400	9,500	5,800	61.0	
West.....	4,750	6,580	6,960	5,780	82.7	
Other States.....	8,620	12,350	12,020	8,150	67.8	
Total.....	57,570	69,570	73,280	51,410	70.2	

1939 PROSPECTS FOR GREEN-WAX BEANS

Discussion of Factors Involved in Canners' Plans for Current Year

The current report issued by the Bureau of Agricultural Economics on intended acreage of green and wax beans for manufacture, indicates a planting of 51,410 acres for 1939. This is approximately the same as the 1935 acreage. The pack in 1935, on a basis of 24/2's, amounted to a little over 7,000,000 cases.

The pack of green and wax beans has been increasing steadily since the pack of canned beans became of commercial importance about fifteen years ago. With the exception of the relatively short packs of 1931, 1932 and 1933, the trend has been upward. The pack in 1933 on a basis of 24/2's was 5,500,000 cases. From 1933 to 1938 the total pack of green and wax beans was doubled. For the first four years of this six-year period (1933 to 1938) the carryover of canned beans at the end of each season was very small. The largest carry-over on record for beans was at the end of the 1937-38 year (July 1, 1938) when nearly 1,000,000 cases were left in canners' hands. This represented about one-tenth of the 1937 pack.

The pack in 1938, amounting to nearly 11,000,000 cases basis 24/2's, was the largest on record. Thus the supply of beans for this year was considerably larger than that of 1937-38. The only indication of the size of the carryover on July 1 of this year is the record of stocks and shipments for the year to date. Stocks of green and wax beans in canners' hands on April 1 totaled 3,535,000 cases, compared with 1,886,000 on April 1, 1938. The difference, amounting to 1,649,000, is about the same as the difference in supply for the two years, or in other words, shipments for the first nine months (that is, from July 1 to April 1) have been about the same this year as they were in 1937-38.

The accompanying tables show the record of shipments for the last two years. They also show the record of acreage, yield and pack for the United States for 1933 to 1938. Similar figures for the principal bean-packing States are shown for the last two years only. It should be noted that these tables supplement the tables given for green and wax beans in the "Production and Distribution Statistics" bulletin issued by the Division of Statistics in January 1938.

Year	Planted	Harvested	Yields per acre		Actual pack Cases	Expected pack Cases
	<i>Acres</i>	<i>Acres</i>	<i>Tons</i>	<i>Cases</i>	<i>24/8</i>	<i>24/8</i>
1933.....	42,800	40,770	1.48	136	5,531,805	5,575,700
1934.....	47,860	45,100	1.47	140	6,300,362	6,221,800
1935.....	51,730	49,590	1.64	144	7,161,107	6,724,900
1936.....	57,570	50,180	1.52	132	6,629,469	7,452,900
1937.....	69,570	63,120	1.67	159	10,051,843	8,637,300
1938.....	73,280	67,800	1.77	161	10,914,997	9,590,400

	Green		Wax		Total	
	1937	1938	1937	1938	1937	1938
	1,000	1,000	1,000	1,000	1,000	1,000
	cases	cases	cases	cases	cases	cases
Carryover.....	71	901	4	66	75	967
Pack.....	8,207	8,596	1,331	1,736	9,538	10,332
Total supply.....	8,278	9,497	1,335	1,802	9,613	11,299

Shipments:						
July, Aug. and Sept.....	4,008	3,777	672	436	4,680	4,213
Oct., Nov. and Dec.....	1,234	1,368	281	302	1,515	1,670
Jan., Feb. and March.....	1,332	1,613	201	268	1,533	1,881
April, May and June.....	803	.....	115	.....	918	.....
Total shipments.....	7,377	.....	1,269	.....	8,646	.....
Year beginning July 1.						

	Planted	Harvested	Yields per acre		Actual pack	Expected pack
	<i>Acres</i>	<i>Acres</i>	<i>Tons</i>	<i>Cases</i>	<i>1,000 cases</i>	<i>1,000 cases</i>
Maine and Vt.:					<i>24/8</i>	<i>24/8</i>
1937.....	1,600	1,460	2.6	272	397	405
1938.....	1,770	1,720	2.9	259	445	448
New York:						
1937.....	8,740	8,100	1.6	160	1,293	1,315
1938.....	9,300	9,120	1.8	156	1,422	1,279
Md. and Del.:						
1937.....	11,400	11,100	1.6	207	2,206	1,516
1938.....	13,800	12,000	1.7	206	2,434	1,835
Pennsylvania:						
1937.....	2,600	2,200	1.7	165	363	346
1938.....	2,700	2,600	1.5	143	372	359
Indiana:						
1937.....	1,300	1,200	1.5	147	176	121
1938.....	1,300	1,000	1.4	173	173	121
Michigan:						
1937.....	6,400	6,300	1.3	97	612	736
1938.....	6,800	6,700	1.3	121	809	782
Wisconsin:						
1937.....	7,700	7,300	1.3	121	881	947
1938.....	8,900	8,700	1.4	135	1,173	1,095
Colorado:						
1937.....	1,100	1,050	3.3	340	356	263
1938.....	1,040	1,040	2.9	248	258	249
Utah:						
1937.....	1,100	1,050	3.2	210	221	271
1938.....	1,250	1,100	3.3	215	246	308
Washington:						
1937.....	1,000	900	4.2	428	385	262
1938.....	1,160	1,060	4.6	385	302	304
Oregon:						
1937.....	1,900	1,715	6.3	588	1,006	933
1938.....	2,340	2,340	6.1	502	1,123	1,100
California:						
1937.....	1,480	1,480	4.4	418	618	676
1938.....	1,300	1,300	4.5	277	360	504

Stocks and Shipments of Green and Wax Beans

Stocks of green and wax beans on April 1, 1939, totaled 3,534,947 actual cases, compared with 1,885,542 cases on April 1, 1938, according to figures compiled by the Association's Division of Statistics. Unsold stocks of both kinds totaled 2,634,306 cases on April 1, 1939, compared with 1,078,026 cases on April 1, 1938.

The Division's figures are based on reports from 74 per cent of the green bean packers and 88 per cent of the wax bean packers, together with estimates for those not reporting.

In the following table are given figures on stocks and shipments of each variety during specified periods:

	1937-38		1938-39	
	Green Cases	Wax Cases	Green Cases	Wax Cases
Stocks, April 1.....	1,704,327	181,215	2,739,795	795,152
Unsold stocks, April 1.....	1,022,596	55,430	1,983,353	650,953
Shipments, Jan., Feb., Mar.	1,332,263	200,692	1,612,890	208,289
Shipments, July 1 to April 1.	6,574,060	1,153,802	6,757,508	1,006,763

In the following table are shown stocks of canned green beans in canners' hands on April 1, 1939, and shipments during March, by regions:

	Sold not shipped	Unsold	Total	Shipments
	<i>Cases</i>	<i>Cases</i>	<i>Cases</i>	<i>Cases</i>
Northeast.....	116,973	272,937	389,910	309,834
Middle Atlantic.....	84,743	444,901	529,644	544,684
Midwest.....	225,916	699,446	925,362	235,694
Western.....	323,520	465,553	789,073	374,752
Southern.....	5,290	100,516	105,806	147,926
Total.....	756,442	1,983,353	2,739,795	1,612,890

In the following table are shown stocks of canned wax beans in canners' hands on April 1, 1939, and shipments during March, by regions:

	Sold not shipped	Unsold	Total	Shipments
	<i>Cases</i>	<i>Cases</i>	<i>Cases</i>	<i>Cases</i>
Northeast.....	81,324	199,103	280,427	150,337
Middle Atlantic.....	12,024	92,824	104,848	19,971
Midwest.....	46,547	285,932	332,479	54,125
Western.....	4,304	54,157	58,461	30,793
Southern.....	.....	18,937	18,937	13,063
Total.....	144,199	650,953	795,152	268,289

REPORT OF HEARINGS ON TOMATOES AND TOMATO JUICE PUBLISHED

Findings of Fact and Suggested Regulations Sent to Secretary of Agriculture

The formal reports on findings of fact and suggested regulations for tomato juice, and for canned tomatoes, have been issued by John McDill Fox, presiding officer at the recent hearings. The findings with respect to tomato juice were published in the April 11 issue of the *Federal Register*. The findings regarding canned tomatoes, including a definition and standard of identity, a standard of quality, and a standard of fill of container, and a suggested regulation on labeling of substandard canned tomatoes, were published in the April 12 issue of the *Federal Register*.

Each of the statements consists of: (1) a general statement with respect to the hearings and testimony, (2) suggested findings of fact, (3) suggested conclusion in the form of a regulation, (4) a notice of time within which to file objections.

In each case this notice as to filing of objections states:

"Within ten days after the receipt of the copy of the *Federal Register* containing this report, any interested person who wishes to object to any matter set out in the suggested findings of fact, conclusion and order, shall transmit such objection in writing to the Hearing Clerk. At the same time each such interested person shall transmit in writing to the Hearing Clerk a brief statement concerning each of the objections taken to the action of the presiding officer upon which he wishes to rely, referring where relevant to the pages of the transcript of evidence."

Following are given, for each of the two products, the suggested findings of fact and suggested conclusions in the form of regulations:

TOMATO JUICE

Definition and Standard of Identity

Suggested Findings

1. Tomato juice is a fabricated product (R., p. 79, p. 153). It is not the expressed juice of the tomato (R., p. 127). It is prepared from tomatoes by a succession of treatments including washing before and after sorting (R., p. 17), sorting (R., p. 18), trimming (R., p. 18), scalding (R., p. 19), crushing and extracting with or without heat to remove a part of the liquid and insoluble materials (R., pp. 19, 27), screening to retain the seeds, skins, and a portion of the fleshy material (R., p. 19), homogenizing or viscolizing to prevent the fleshy material from settling out (R., p. 20), heating just below the boiling point and filling into receptacles (R., p. 20). It may

or may not be processed after filling (R., p. 20). Salt is added (R., p. 20). Some manufacturers add to crushed tomatoes quantities of juice separated from peeled tomatoes. Others add skins, cores and tomato liquid to the crushed whole tomatoes going into the extractor (R., p. 21). One firm heats the crushed tomatoes by live steam before extraction and heats the juice to a point calculated to compensate by evaporation for the water added by condensation (R., p. 21).

2. Tomato juice on the market varies in flavor (R., p. 162), specific gravity (R., pp. 71, 131), viscosity (R., pp. 20, 82) and vitamin content (R., p. 354). This is due in part to methods of manufacture (R., pp. 52, 172, 274) and to the fact that the moisture or water content of fresh tomatoes varies as much as 4 per cent with climate, the soil where grown, the season, and with the rainfall (R., pp. 40, 77, 131).

3. Juice expressed from tomatoes contains among other ingredients (a) from 92 per cent to 96 per cent water (R., p. 40), (b) sugar (R., p. 46), (c) pectinous material (R., p. 181), (d) citric acid (R., p. 46), (e) ascorbic acid (R., p. 253) and (f) carotene (R., p. 280).

4. Ascorbic acid is Vitamin C (R., pp. 272, 294), the anti-scorbutic vitamin. It is essential to good health in human beings, and tomato juice if prepared so as to preserve the vitamin is a good source of Vitamin C. The ascorbic acid or Vitamin C content of tomato juice can be measured with reasonable accuracy (R., p. 250). Some brands contain only one-half as much ascorbic acid as other brands (R., pp. 194, 357).

5. Carotene in the beta form is substantially the same as Vitamin A (R., p. 281), which is essential to human health (R., p. 276). It is found in tomatoes (R., p. 280) and when protected during the course of manufacture is found in tomato juice (R., p. 289).

6. The preservation of the vitamin properties of the tomatoes in tomato juice is in the interest of consumers (R., pp. 247, 290).

7. It is impossible to establish a reasonable definition and standard of identity for tomato juice that will fix specific gravity, ascorbic acid content (R., pp. 77, 131, 362), the proportion of soluble to insoluble solids or the percentage of other ingredients (R., p. 79).

8. There are present in tomatoes enzymatic substances which if not inactivated bring about immediate chemical changes in the tomatoes when crushed if oxygen is present (R., pp. 50, 174). As a result of such chemical action both the ascorbic acid and the carotene in the tomato juice may be destroyed (R., p. 274), the tomato flavors may be affected (R., p. 174), the product may lose viscosity, and separation may occur (R., p. 176), due to the fact that the natural pectin of the tomato is changed to pectic acid (R., pp. 181, 274).

9. Enzymes are inactivated only when the tomatoes are heated to approximately boiling temperature (R., pp. 50, 179). They are appreciably inactivated when tomatoes are subjected to the direct application of steam during the process of crushing (R., p. 179). Oxygen entrapped in tomatoes is also expelled by the application to them of steam during the process of crushing (R., p. 312).

10. The portions of the tomato next to the skin and seeds contain the highest concentration of the ascorbic acid, Vitamin C and of carotene, Vitamin A (R., pp. 184, 207 contra p. 360), and live steam is one of several efficient, practical means that can be used for extracting all of the essential tomato qualities, including flavor (R., p. 186).

11. Steam condensate forms when steam is applied to crushed tomatoes. There is testimony based upon experi-

ments that in the normal course of manufacture the amount of water thus added is approximately 11 per cent and the percentage of water content of the tomato juice is increased .945 to .963 per cent. The statement on page 202 of the record that the increase would be $\frac{1}{2}$ of 1 per cent does not seem to be accurate. Tomato juice that would otherwise have a water content of 96 per cent acquires, if the added condensate is not removed, a water content of approximately 97 per cent. There would have been added, however, 10 per cent of water to the mass (R., p. 42). The amount of steam condensate resulting from the use of steam during the process of crushing can be calculated with reasonable accuracy (R., p. 201). There is some testimony that an equivalent amount of water can be, and under present practice is, substantially removed by evaporation (R., p. 202) together with, perhaps, some integral part of the tomato (R., p. 265).

12. A tomato product obtained by evaporating to remove from 10 per cent to 12 per cent water added as steam condensate in a process of manufacture otherwise similar to the process of manufacture of tomato juice (R., pp. 17, 124, 125, 157, 227), is not the identical thing as tomato juice which the consumer understands (R., p. 326) and is not the identical thing as tomato juice prepared by the process of manufacture used by most tomato juice manufacturers (R., pp. 17, 123-125, 157, 227, 344-346) which does not add water as steam condensate and later evaporates in an attempt to compensate for such addition of water (R., pp. 126, 149, 150).

13. In evaporating the product in an attempt to remove the steam condensate the exact water that has been added cannot be removed. (R., pp. 38, 125.)

14. In evaporating the product in an attempt to remove the steam condensate a negligible though certain amount of the flavoring of the tomato is boiled off, flavoring being an integral substance as regards the consumer desire of the product (R., pp. 125, 134-140, 143-154, 303), and some ascorbic acid or Vitamin C may be lost. (R., p. 202.)

15. Tomato juice extracted with steam is now sold on the market in substantial quantities, and has been sold in substantial quantities continuously since 1930 under the common and usual name of tomato juice. (R., pp. 203, 217).

16. The flavor may be determined by organoleptic tests (R., p. 138).

17. The evidence indicates there were suggested four reasonable definitions and standards of identity for tomato juice, by Mr. Callaway (R., pp. 23, 117), by Mr. Howard (R., pp. 126, 127), by Mr. Osburn (R., pp. 157, 158), and by Mr. Sewell (R., p. 322), which reasonable definitions and standards of identity do not contemplate the addition of water, either as steam condensate or otherwise, in the preparation of the product.

18. Such tomatoes are washed to remove dirt and dust and they may or may not be scalded or passed through a steam box to loosen the skins, in either event any water collecting on the tomatoes is permitted to drain off; sorted to remove unsuitable or unfit tomatoes; trimmed to remove decomposed portions; so crushed and strained, either cold or so heated as to preclude the addition of water, as to extract the liquid and a part of the flesh and to exclude skins, seeds and core material; such liquid and a part of the flesh may or may not be homogenized to reduce the size of the fleshy particles so as to prevent rapid settling; salt may or may not be added for seasoning; and if the finished product is sealed in a container it may or may not be so processed by heat before or after sealing as to prevent spoilage. (R., pp. 17, 18, 23, 117, 118, 122, 127, 157, 158, 322, 329.)

19. Ordinarily the term "juice" to most people means a clear liquid which separates from a fruit and in many cases the word "juice" represents a filtered liquid (R., p. 80) but when associated with the word "tomato" it has come to represent, in addition to the liquid portion of the tomato, a part of the flesh which has been finely divided and carried in suspension. (R., pp. 12, 19, 80, 23, 117, 122, 127, 128, 153, 157, 322, 328, 329.)

20. Tomato juice is not a concentrated product. (R., pp. 12, 25, 38, 73, 123, 133, 134, 161.)

21. It would be unreasonable and impracticable in the interest of consumers to define and standardize the food product commonly known as tomato juice based upon an analysis of the finished product as an index of identity for the reason that tomatoes vary greatly as to their specific gravity, vary with the season, from year to year, in the same locality, and it is not a product having a definite amount of solids and liquid. (R., pp. 78, 79, 115, 130, 131, 322.)

22. Most firms manufacturing tomato juice use essentially the same process and the essential and typical steps in such process do not include a method of heating and crushing tomatoes in such manner that from 10 per cent to 12 per cent of water is added to the crushed tomatoes by means of live steam coming directly in contact with the crushed tomatoes and condensing into water. (R., pp. 17, 123-125, 157, 227, 344-346, 365) though many firms formerly did use such a process.

23. Other tomato juice manufacturers have heretofore used a process whereby live steam came in contact with crushed tomatoes and water added to the product as steam condensate, and that there has been an abandonment (R., pp. 346, 347, 349), with one exception (R., pp. 21, 125, 365), of the use of live steam in the tomato juice industry where such live steam introduces water into the product as steam condensate.

24. When whole tomatoes are washed or scalded to remove dirt and to loosen the skins, any water remaining on the whole tomatoes is permitted to drain off and the amount of water which may be added in this manner is insignificant. (R., pp. 28, 29, 159-161, 226.)

25. Under the new Food, Drug, and Cosmetic Act, objective examination of the finished product is not the only way to determine whether water as steam condensate or otherwise has been added to tomato juice in the process of manufacture. (R. pp. 70, 76-78.)

26. There is substantial evidence that in the manufacture of tomato juice, where there are various methods of manufacture available and equally suitable in the respect that they do not impair the valuable constituents or the vitamin that are in the tomato, it is in the interest of the consumers and will promote honesty and fair dealing in their interest that a method which debased the article in any respect or which permitted a manipulation of the article by adding water and later evaporating in an attempt to compensate for the water added should be excluded. (R., pp. 25, 38, 42, 69, 74, 78, 128, 129, 303.)

27. In the manufacture of tomato juice, there is some testimony that there are a number of machines on the market and in use, other than the one using the direct application of live steam to crushed tomatoes, whereby the tomatoes are crushed and heated in such manner that air is excluded and enzymes inactivated equally as efficient as the method which utilizes the direct application of live steam to crushed tomatoes. (R., pp. 52, 53, 332, 333.)

28. There would seem to be, from the evidence which is slight that there is a consumer preference for tomato juice

manufactured with unimpaired vitamin content and without added water. (R., pp. 74, 75, 326.)

29. Vitamin "C" in tomato juice is variable, due as much to natural variations in tomatoes as to methods of preparation. (R., pp. 67-69, 129, 193, 194, 253-255, 272, 274, 275, 287, 297, 347, 348, 354-358.)

30. All tomato juices have substantial amounts of Vitamin "C" in them. (R., pp. 193-198, 297, 300, 301, 333, 346-348, 354-358.)

31. Tomato juice having the lowest reported Vitamin "C" content is indisputably still tomato juice. (R., pp. 70, 129, 297, 301, 333, 346-348, 354-358.)

32. The vitamin content is therefore not an identity factor but undoubtedly is a quality factor. (R., pp. 70, 74, 129, 301, 348, 354-358.)

33. All of the foregoing findings of fact would apply to a product prepared from yellow varieties of tomatoes except that when yellow varieties of tomatoes are used the product is known as and labeled yellow tomato juice. (R., pp. 23, 118, 129, 158, 324.)

Suggested Conclusion in the Form of a Regulation

Tomato Juice, Yellow Tomato Juice—Identity. (a) Tomato Juice is the unconcentrated liquid extracted from mature tomatoes of red varieties, with any unsoundness removed by trimming, and with or without scalding followed by draining. In the extraction of such liquid, heat may be applied by any method which does not add water thereto. Such liquid is strained free from skins, seeds and other coarse or hard substances, but carries finely divided insoluble solids from the flesh of the tomato. Such liquid may be homogenized, and may be seasoned with salt. When sealed in a container it is so processed by heat, before or after sealing, as to prevent spoilage.

(b) Yellow Tomato Juice is the liquid extracted from tomatoes of yellow varieties. Except for the use of tomatoes of yellow varieties, it conforms to the definition and standard of identity for tomato juice.

CANNED TOMATOES

Definition and Standard of Identity

Suggested Findings of Fact

Tomatoes as used in canning must be of a red variety. (R., pp. 18, 35 and 58), and must be mature (R., p. 18).

(1) *First type—Canned tomatoes.* The most common of the three types of canned tomatoes is generally referred to simply as "tomatoes." In the packing process tomatoes are washed, sorted, trimmed, scalded, peeled, and cored. The order of these processes varies somewhat according to individual packer practice. When the liquid which drains from the tomatoes in the peeling and coring process is to be used in the finished product, sorting of the tomatoes is generally done before scalding. Tomatoes which are sorted out because of imperfections are trimmed by hand in such a manner as to remove imperfections. Following this scalding process, tomatoes are peeled and cored. If they have not been sorted and trimmed before scalding, the liquid, cores, and trimmings obtained at this point in the process are discarded. If, however, there has been sorting and trimming before scalding so that no unsound tomatoes are received by the peelers, the peels, cores, and liquid are kept for use in canning tomatoes or other tomato products. The peeled and cored tomatoes may be packed in containers either by hand or by a machine. To the tomatoes in their containers is added sufficient liquid which has drained from tomatoes in the

peeling and coring process to fill the cans completely. The air in the tomatoes in their containers is then removed by heat or by a vacuum process and the container sealed. Thereafter, the container is processed by heat, so as to prevent spoilage, and properly cooled, so as to prevent overcooking. (R., pp. 18 and 19.)

(2) *Second type—Solid pack.* In addition to the process of canning described above, some canners follow the practice of filling the container full of whole, sound, mature, red tomatoes, trimmed and cored as described in (1), without the addition of any liquid which may have drained from such tomatoes or from any other tomatoes. This type of canned tomatoes differs from the first type described only in that no additional tomato liquid is added. (R., p. 19.)

(3) *Third type—Tomatoes with puree from trimmings.* In this third method of canning tomatoes, whole tomatoes, trimmed, peeled, and cored as described in the first process, are placed in their containers so that their containers are about two-thirds to three-fourths full. To these partly filled containers is added a hot tomato liquid. This liquid is procured by placing the clean peels, cores, and liquid which has drained from tomatoes in the peeling and coring process into a machine known as a cyclone. To this tomato mixture may be added some whole tomatoes. The tomato mixture is then processed in the cyclone so as to strain the liquid and fleshy parts of the tomato from the skins, cores, and seeds. The resulting liquid is heated practically to boiling, but the heat is kept at such a point that there is no substantial concentration of the tomato material. The canned tomatoes, with the addition of this tomato material, have been sold under the name of "Tomatoes with Puree from Trimmings." (R., pp. 19 and 20.)

"Tomatoes with puree from trimmings"—A misnomer. The use of the term "tomatoes with puree from trimmings" to describe the third type of canned tomatoes is inaccurate, because the tomato material added to canned tomatoes is neither a puree, as that word is generally understood in connection with tomato products, nor is it prepared from trimmings. (R., p. 19.) The "puree" part of tomatoes with puree from trimmings is understood by consumers to be a concentrated product, and consumers expect to procure a concentrated product when they purchase the tomato product under the name of "Tomatoes with Puree from Trimmings." (R., p. 18.)

Labeling tomatoes with puree from trimmings. Since tomato by-products in the form of tomato flesh and liquid obtained from skins, cores, and seeds cannot be accurately and truthfully described as tomatoes "with puree from trimmings," the product should be so labeled, so as truthfully to reveal the source of the raw-material ingredients. (R., pp. 25, 26, and 27.) Rot and decomposition attach first to the skins of the tomatoes and are concentrated, therefore, in a product made from skins, seeds, and cores. (R., p. 27.) Canned tomatoes made from whole tomatoes have generally been found to have a lower mold count than canned tomatoes prepared in part from liquid extracted from the skins of tomatoes. (R., p. 27.) The history of canned tomatoes with added material procured from skins, seeds, and cores reveals that this product has not merited the same degree of favor as tomatoes prepared from the whole fruit. (R., pp. 13, 14, 60, and 61.)

Flavorings. Zestful and harmless flavorings of any variety should be permitted to be used in the manufacture of canned tomatoes. (R., p. 23.) A label declaration declaring the presence of basil or other flavoring ingredients is necessary, in order to promote honesty and fair dealings in the interest

of the consumer. (R., p. 23.) *Salt—Basil.* Salt and basil leaves are sometimes added to canned tomatoes.

Suggested Conclusions in the Form of a Regulation

Canned Tomatoes—Identity; Label Statement of Optional Ingredients. (a) Canned tomatoes are mature tomatoes of red varieties, with any unsoundness removed by trimming, which are peeled and cored and to which may be added one or both of the following optional ingredients:

(1) The liquid draining from such tomatoes during or after peeling and coring.

(2) The liquid strained from tomato by-products (clean, sound peelings and cores from tomatoes of red varieties, with or without tomatoes or pieces of tomatoes of such varieties). It may be seasoned with one or more of the optional ingredients:

(3) Salt.

(4) Spices.

(5) Flavoring.

It is sealed in a container and so processed by heat as to prevent spoilage.

(b) When optional ingredient (2) is present, the label shall bear the statement "Strained Tomato By-products Added." When optional ingredient (4) or (5) is present, the label shall bear the statement or statements "Spice Added" or "With Added Spice," "Flavoring Added" or "With Added Flavoring," as the case may be. If two or all of optional ingredients (2), (4), and (5) are present, such statements may be combined, as for example, "Strained Tomato By-products, Spice, and Flavoring Added." In lieu of the word "Spice" or "Flavoring" in such statement or statements the common or usual name of such spice or flavoring may be used. Wherever the name "Tomatoes" appears on the label so conspicuously as to be easily seen under customary conditions of purchase, the statement or statements herein specified showing the optional ingredients present shall immediately and conspicuously precede or follow such name, without intervening written, printed, or graphic matter.

Standard of Quality

Suggested Findings

1. In 1931 under the McNary-Mapes Amendment to the Food and Drugs Act of 1906 (21 U. S. C. Sec. 10, Par. 5, in the case of food) the Secretary of Agriculture promulgated a reasonable standard of quality for canned tomatoes (R., pp. 8-11); such standard of quality included four factors that go to make up quality in canned tomatoes (R., p. 13); such quality factors are (1) the drained weight of the pieces of tomato in the can, (2) the color of the tomatoes, (3) the amount of peel and (4) tomato blemishes (R., p. 13); that objective measurements of such factors were included in such standard of quality (R., p. 11); such standard of quality for canned tomatoes has been in force since 1931 with minor changes (R., pp. 11-13); and such standard of quality was promulgated, including changes, for the purpose of promoting honesty and fair dealing in the interest of the consumer (R., p. 11).

2. A standard of quality for canned tomatoes based, as one of the factors to be considered, upon the weight of the tomatoes in the container that are retained, after proper draining for two minutes, on a sieve (eight inches in diameter if the quantity of the contents of the container is less than three pounds and twelve inches in diameter if such quantity is three pounds or more) having two meshes to the linear inch and the bottom of which is made of wire of a uniform diameter of 0.054 inch, woven into square meshes of a uni-

form inside diameter of 0.446 inch, equalling or exceeding one-half of the weight of water at 68° F. required to fill the container, is a reasonable one and would promote honesty and fair dealing in the interest of the consumers for the reasons that the sieve of the size described permits the liquid and very small pieces of tomato flesh to fall through the openings, retaining the larger tomato portions; one-half at least by volume of the can is tomato meats of sufficient size to serve the uses which consumers make of the article; consumers can determine their needs and make budgetary allowances in purchasing the size can best suited to their needs knowing that not more than one-half is liquid and tomato fragments; and it can be precisely determined (R., pp. 13-16, 112-115, 156).

3. It is reasonable and will promote honesty and fair dealing in the interest of consumers to specify a drained weight requirement for canned tomatoes based on the water capacity of the container rather than a drained weight requirement based on the total contents in the container for the reason that the can, to the consumer's eye, is a measure of the quantity of drained tomato meats that ought to be received; recent examination of thousands of cans of tomatoes show that a requirement based on the water capacity of the container would be fairer and more equitable both to the canner and the consumer; it would give the consumer a better quality of tomatoes; it could be accurately determined; and it is in accord with good commercial canning practice (R., pp. 11-18, 37-39, 108-116, 156).

4. It is reasonable and it will promote honesty and fair dealing in the interest of consumers to prescribe, in a reasonable standard of quality for canned tomatoes, a method for determining the weight of water required to fill a metal container with lid attached by double seam which will include

(1) opening the container without injuring the double seam, removing contents, washing, drying and weighing the empty container.

(2) filling such container with distilled water of a temperature of 68° F. to three-sixteenths of an inch below the top level and then weighing the container and the water; and

(3) the result, after subtracting the weight of the empty container described in (1) from the weight of the container and water described in (2), is the weight of water required to fill the container, (R., pp. 28-30)

for the reason that the method is definite; that any method based on can dimensions would be approximate; that domestic and imported can construction differs; that calculations from dimensional measurements are not accurate; that three-sixteenths of an inch is the accepted and determined measure of the double seam; that the displacement method is not practicable or reasonable for a canner to use in his factory; and that the method here recommended is in accord with good commercial canning practice. (R., pp. 15, 16, 29, 30, 122, 125, 156.)

5. It is reasonable and will promote honesty and fair dealing in the interest of consumers to prescribe, in a reasonable standard of quality for canned tomatoes, a method of determining the weight of water required to fill containers other than those attached by double seam, which will include

(1) opening the container, removing contents, washing, drying and weighing the empty container.

(2) filling such container with distilled water of a temperature of 68° F. to the top and then weighing the container and the water; and

(3) the result, after subtracting the weight of the empty container described in (1) from the weight of the container and water described in (2), is the weight of water required to fill the container (R., pp. 28-30)

for the reasons that the method is definite; that any method based on can or container dimensions would be approximate; that domestic and imported container construction differs; that calculations from dimensional measurements are not accurate; that when tomatoes are in containers with lids other than those attached by means of a double seam the lid is placed on the top of the container; that the displacement method is only practicable with good commercial canning practice. (R., pp. 15, 16, 29, 30, 122, 125, 156.)

6. A standard of quality for canned tomatoes based, as one of the factors to be considered, upon the redness or height of the color of the tomatoes in the container

determined by taking and removing from the sieve the drained tomatoes obtained in determining the drained weight and cutting out and successively segregating those portions in which the red color is least developed until one-half by weight of such drained tomatoes have been so segregated; by reducing such segregated portions to a uniform mixture without removing or breaking the tomato seeds; by putting such mixture into a black container to a depth of at least one inch; by freezing such mixtures from air bubbles and skimming off or pressing below the surface all visible tomato seeds; by comparing the color of such mixture, in full diffused daylight or its equivalent, with the blended color of combinations of the following Munsell color discs, or the color equivalent of such discs:

Disc 1. Red—5R 2.6/13 (glossy finish)

Disc 2. Yellow—2.5 YR 5/12 (glossy finish)

Disc 3. Black—N 1/ (glossy finish)

Disc 4. Grey—N 4/ (mat finish);

and if the redness or height of the color of such mixture is not less than that of any combination of the above-described Munsell color discs in which one-third of the area of disc 1 and not more than one-third of the area of disc 2 (regardless of the exposed area of discs 3 and 4) is exposed, then the color factor requirement is met (R., pp. 18-23),

would be reasonable and would promote honesty and fair dealing in the interest of consumers in that the consumer would be assured of getting tomatoes with fairly well developed red color, and would be in accord with good commercial practice (R., pp. 20-21, 109-116).

7. In a standard of quality for canned tomatoes a maximum allowance of one square inch of tomato peel per pound of canned tomatoes in the container as one of the quality factors would be reasonable and would promote honesty and fair dealing in the interest of consumers in that, of the thousands of cans of tomatoes examined between July 1, 1937, and September 21, 1938, representing the output of 388 packers located in all of the principal tomato producing sections of the United States and being a very representative cross section of the industry, the great majority showed less than one inch of tomato peel per pound of canned tomatoes; the consumer expects to get a minimum amount of peel in a can of tomatoes; and it is in accord with good commercial practice (R., pp. 23-25, 109-116, 164-166).

8. In a standard of quality for canned tomatoes, a maximum allowance of one-fourth square inch of tomato blemish per pound of canned tomatoes in the container, as one of the quality factors, would be reasonable and would promote honesty and fair dealing in the interest of consumers for the reason that this quality factor has been in force since 1931 without change; of the thousands of cans of tomatoes examined for this factor but few failed to meet the requirement and the great majority was well below the tolerance; and it is in accord with good commercial practice and consumer understanding of the article (R., pp. 26-28, 109-116, 158).

9. There are no yellow varieties of tomatoes canned and

sold under the name of tomatoes unqualified (R., pp. 22, 23, 148).

Suggested Conclusions in the Form of a Regulation

Canned Tomatoes—Standard of Quality. (a) The standard of quality for canned tomatoes is as follows:

(1) The drained weight, as determined by the method prescribed in subsection (b) (1), is not less than 50 per cent of the weight of water required to fill the container, as determined by the following method for water capacity of containers.

(1) In the case of a container with lid attached by double seam, cut out the lid without removing or altering the height of the double seam.

(2) Wash, dry, and weigh the empty container.

(3) Fill the container with distilled water at 68° Fahrenheit to $\frac{3}{16}$ inch vertical distance below the top level of the container, and weigh the container thus filled.

(4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

In the case of a container with lid attached otherwise than by double seam, remove the lid and proceed as directed in clauses (2) to (4) inclusive, except that under clause (3) fill the container to the level of the top thereof.

(2) the strength and redness of color, as determined by the method prescribed in subsection (b) (2), is not less than that of the blended color of any combination of the color discs described in such method, in which one-third the area of disc 1, and not more than one-third the area of disc 2, is exposed;

(3) peel, per pound of canned tomatoes in the container, covers an area of not more than 1 square inch; and

(4) blemishes, per pound of canned tomatoes in the container, cover an area of not more than one-fourth square inch.

(b) Canned tomatoes shall be tested by the following method to determine whether or not they meet the requirements of clauses (1) and (2) of subsection (a):

(1) Remove lid from container, but in the case of a container with lid attached by double seam, do not remove or alter the height of the double seam. Tilt the opened container so as to distribute the contents over the meshes of a circular sieve which has previously been weighed. The diameter of the sieve used is 8 inches if the quantity of the contents of the container is less than 3 pounds, or 12 inches if such quantity is 3 pounds or more. The meshes of such sieve are made by so weaving wire of 0.054 inch diameter as to form square openings 0.446 inch by 0.446 inch. Without shifting the tomatoes, so incline the sieve as to facilitate drainage of the liquid. Two minutes from the time drainage begins, weigh the sieve and drained tomatoes. The weight so found, less the weight of the sieve, shall be considered to be the drained weight.

(2) Remove from the sieve the drained tomatoes obtained in (1). Cut out and segregate successively those portions of least redness until 50 per cent of the drained weight, as determined under (1), has been so segregated. Commingle the segregated portions to a uniform mixture without removing or breaking the seeds. Fill the mixture into a black container to a depth of at least 1 inch. Free the mixture from air bubbles, and skim off or press below the surface all visible seeds. Compare the color of the mixture, in full diffused daylight or its equivalent, with the blended color of combinations of the following concentric Munsell color discs of equal diameter, or the color equivalents of such discs:

1. Red—Munsell 5R 2.6/13 (glossy finish).
2. Yellow—Munsell 2.5 YR 5/12 (glossy finish).
3. Black—Munsell N 1/ (glossy finish).
4. Grey—Munsell N 4 (mat finish).

Labeling of Substandard Canned Tomatoes

Suggested Findings of Fact

1. That in 1931, under the McNary-Mapes Amendment to the Food and Drugs Act of 1906 (21 U. S. C. Sec. 10, Par 5, in the case of food) to promote honesty and fair dealing in the interest of the consumer, the Secretary of Agriculture, after public hearings, promulgated a regulation providing for the labeling of canned foods that fell below the applicable standard of quality or fill of container, which included canned tomatoes (R., pp. 10-12); that such regulation required the label statement to indicate plainly that the product was substandard (R., p. 10); that the factors considered essential to indicate plainly that the product was substandard were (1) the relative prominence of the statement on the label; (2) such a position of the statement on the label with respect to the name or a pictorial representation of the product as would make the statement apparent or discernible under ordinary conditions of purchase and sale; (3) the kind and size of type used; and (4) a statement to be of such a nature that it would not convey a misleading impression (R., pp. 10-11); that such a regulation embodying these factors has been in force since 1931; and that essentially the same requirements are hereinafter recommended. (R., pp. 12, 30-32).

2. That it would be reasonable and would promote honesty and fair dealing in the interest of consumers in promulgating a regulation providing for the labeling of canned tomatoes that fell below the applicable standards of quality or fill of container, to require such a label statement as would plainly indicate the product was substandard; that such a label statement would include prominence, position, display, type, clarity and certainty; and that such a label statement would indicate clearly and concisely that the article failed to meet the standards of quality or fill of container applicable thereto. (R., pp. 10-27, 30-32).

3. That such a label statement would plainly indicate that the product was below standard if it appeared in connection with the product name and/or pictorial representation thereof so as to be clearly visible under ordinary conditions of purchase and sale (R., pp. 13-15).

4. That it would be reasonable and would promote honesty and fair dealing in the interest of consumers to require, on substandard quality canned tomatoes, the statement "Below Standard Quality" on one line and "Good Food—Not High Grade" on a line below; to be printed in type of 12-point Cheltenham bold condensed caps for the first line and for the second line 8-point type of the same style if the quantity of the contents of the container is less than one pound, and if such quantity is one pound or more in type of the same style, the first line to be 14-point, and the second line 10-point; such statement to be enclosed within a border, not less than 6 points in width, in the shape of a rectangle; and such statement, so enclosed, to be on a strongly contrasting, uniform background, so placed as to be clearly seen when the word "Tomatoes" or any pictorial representation of a tomato is viewed, wherever such word or representation appears so conspicuously as to be easily seen under customary conditions of purchase and sale. (R., pp. 10-27, 30-33.)

5. That it would be reasonable and would promote honesty and fair dealing in the interest of consumers to require, on below standard fill of container canned tomatoes, the statement "Below Standard Fill" to be printed in type of 12-point Cheltenham bold condensed caps for the first line and for the second line 8-point type of the same style if the quantity of

the contents of the container is less than one pound, and if such quantity is one pound or more in type of the same style, the first line to be 14-point and the second line 10-point; such statement to be enclosed within a border, not less than 6 points in width, in the shape of a rectangle; and such statement, so enclosed, to be on a strongly contrasting, uniform background, so placed as to be clearly seen when the word "Tomatoes" or any pictorial representation of a tomato is viewed, wherever such word or representation appears so conspicuously as to be easily seen under customary conditions of purchase and sale (R., pp. 10-27, 30-33, 36).

6. That it would be reasonable and would promote honesty and fair dealing in the interest of consumers to require, on canned tomatoes that fall below both the standard of quality and the standard of fill of container applicable thereto, both the statements described in paragraphs 4 and 5, the one following the other, and enclosed in a single rectangle. (R., pp. 10-27, 30-34.)

7. That the statement "Below U. S. Standard" on below standard quality or fill of container canned tomatoes is indefinite (R., pp. 22, 30-33); is misleading (R., pp. 16, 17, 23, 30-33); and conveys the impression to the consumer that the United States Government supervised the preparation of the article. (R., pp. 16, 17, 22, 23, 30-33, 34.)

8. That the statement "slack fill" on substandard quality or fill of container canned tomatoes is ambiguous (R., pp. 23, 24, 30-33, 36, 37); is indefinite (R., pp. 25, 30-33, 36); and the meaning that is intended to be conveyed to the consumer by the words "slack fill" is uncertain. (R., pp. 24, 25, 30-33, 36, 37.)

Conclusions in the Form of a Suggested Regulation Prescribing the Label Statements for Canned Tomatoes Falling Below the Standard of Quality; the Standard of Fill of Container or Both Applicable Thereto.

From the foregoing Suggested Findings of Fact, the following suggested reasonable regulation prescribing the label statements for canned tomatoes falling below the standard of quality and/or the standard of fill of container applicable thereto, is recommended:

(a) When Canned Tomatoes Fall Below the Standard of Quality Therefor:

The term "Substandard Quality" means the statement "Below Standard Quality Good Food—Not High Grade" printed in two lines of Cheltenham bold condensed caps. The words "Below Standard Quality" constitute the first line, and the second immediately follows. If the quantity of the contents of the container is less than one pound, the type of the first line is 12-point, the second, 8-point. If such quantity is one pound or more, the type of the first line is 14-point, and of the second, 10-point. Such statement is enclosed within lines not less than 6 points in width, forming a rectangle. Such statement is within enclosing lines, is on a strongly contrasting, uniform background, and is so placed as to be easily seen when the name of the food or any pictorial representation is viewed, wherever such name or representation so appears as to be conspicuously and easily seen under customary conditions of purchase.

(b) If the Quality of Canned Tomatoes Falls Below the Standard—

If the quality of canned tomatoes falls below the standard hereinbefore prescribed, the label shall bear the statement of "Below Standard Quality" specified but, in lieu of such statement, the label may bear the alternative statement "Below Standard in Quality —," the blank to be filled in with the words specified with reference to which such canned to-

matoes fails to meet the requirements as follows: (1) "Excessively Broken Up"; (2) "Poor Color"; (3) "Excessive Peel"; (4) "Excessive Blemishes." If such canned tomatoes fail to meet both of these conditions, the words "Excessive Peel and Blemishes" may be used instead of the words hereinbefore denoted. Such alternative statement shall immediately and conspicuously precede or follow, without intervening written, printed, or graphic matter, the name "Tomatoes" and any statements required or authorized to appear with such name.

(c) When Canned Tomatoes Fall below the Standard of Fill of Container Applicable Thereto—

The term "substandard fill" means the statement "Below Standard in Fill" printed in Cheltenham bold condensed caps. If the quantity of the contents of the container is less than one pound, the statement is in 12-point type; if such quantity is one pound or more, the statement is in 14-point type. Such statement is enclosed within the lines, not less than 6 points in width, forming a rectangle; but if the statement "Below Standard Quality" is also used, both statements (one following the other) may be enclosed within the same rectangle. Such statement or statements, with enclosing lines, are on a strongly contrasting, uniform background, and are so placed as to be easily seen when the name of the food or any pictorial representation thereof is viewed, wherever such name or representation appears so conspicuously as to be easily seen under customary conditions of purchase.

Standard of Fill of Container

Suggested Findings

1. *Types of containers.* Containers for tomatoes may be of two types: (1) the usual "sanitary" tin can (R., p. 34), and (2) glass and all other kinds of containers other than the ordinary "sanitary" tin can (R., p. 36).

2. *Method of measuring capacity of fill for all containers.* A. The fill of container for tin cans with lids of a double seam shall be determined by the following method:

(1) Cut the lid without removing or altering the height of the double seam.

(2) Measure the vertical distance from the top level of the container to the top level of the food by means of a depth gauge.

(3) Remove the food from the container; then wash, dry, and weigh the container.

(4) Fill the container with water which is at room temperature to three-sixteenths of an inch vertical distance from the top level of the container. Then weigh the container thus filled and determine the weight of the water by subtracting the weight of the container found as prescribed in (3).

(5) Draw off enough water from the container so that the level of the water corresponds to the level of the food as found in the measurement (2) above. Weigh the container with the remaining water and determine the weight of such remaining water by subtracting the weight of the container as determined by method (3) above.

(6) Divide the weight of water found by method (5) above by the weight of water found by method (4) above, and multiply by 100. The result should be the percentage of the total capacity of the container occupied by the food.

B. The fill of container for glass or other types of container, other than described in "A" above, shall be determined in the same method as outlined above, except that process (1) is omitted and in lieu of process (4) the container is filled with water so that the water is level with the top of such container. (R., pp. 34-37, 55.)

3. *A practical method.* The method of measuring the fill of container as presented in suggested finding number 2 (a) is reasonably accurate. The method as applied to tin cans with a double seam does not reach mathematical exactness, however, because an allowance of three-sixteenths of an inch is made for the height of such seams, whereas such seams may not be exactly three-sixteenths of an inch. Such variations from the allowance as may exist are, however, of no particular consequence as affecting either the consumer or the producer. (R., p. 37.)

4. *Necessity for a standard.* A standard of fill of container based upon the suggested finding 2 is a necessity, in order to promote honesty and fair dealings in the interest of the consumer by insuring him a container which is practically full. (R., pp. 35, 38, 56, 57.)

5. *Good commercial practice.* Under good commercial practice, a standard fill of container based upon the preceding suggested findings could be easily met by good commercial practice. (R., p. 38.)

6. *Profile ends.* In addition to the space in the can as measured to the bottom of the lid, there are seams in each end of the can which allow some additional space in such containers. (R., pp. 50, 51.)

7. *Head-space measurement.* The method of measuring head-space in order to determine the percentage of the container occupied by the food is not an accurate index to the proportion of the food to the space in the container. This is true because many containers for canned tomatoes are not cylindrical and only perfect cylinders can be measured accurately by the head-space method. Even the ordinary tin can in general commercial use is not a perfect cylinder, and the measuring of head-space is accurate for determining the proportion of the capacity of the container occupied by food only in the case of containers having a uniform cross-section area throughout the entire height. (R., p. 56.)

8. *Irregular container—head-space.* Irregular containers now in use for canned tomatoes cannot be effectively measured by the head-space method. (R., p. 56.)

9. *A simple and practical method.* The methods for measuring fill of container for canned tomatoes, set out in suggested finding number 2, are simple and practical, and lend themselves most admirably to commercial practice. (R., pp. 55, 56.)

10. That the standard practice of canners which has received consumer acceptance is that the fill of container of canned tomatoes is a fill of not less than 90 percent of the total capacity of the container.

Suggested Conclusion in the Form of a Regulation

Upon the basis of the foregoing suggested findings of fact, the following reasonable definition and standard of identity for fill of container for canned tomatoes is hereby suggested to be promulgated as a regulation:

Canned Tomatoes—Fill of Container. (a) The standard of fill of container for canned tomatoes is a fill of not less than 90 percent of the total capacity of the container, as determined as follows:

(1) In the case of a container with lid attached by double seam, cut out the lid without removing or altering the height of the double seam.

(2) Measure the vertical distance from the top level of the container to the top level of the food.

(3) Remove the food from the container; wash, dry, and weigh the container.

(4) Fill the container with water to three-sixteenths of an

inch vertical distance below the top level of the container. Record the temperature of the water, weigh the container thus filled, and determine the weight of the water by subtracting the weight of the container found in (3).

(5) Maintaining the water at the temperature recorded in (4), draw off water from the container as filled in (4) to the level of the food found in (2), weigh the container with remaining water, and determine the weight of the remaining water by subtracting the weight of the container found in (3).

(6) Divide the weight of water found in (5) by the weight of water found in (4), and multiply by 100. The result shall be considered to be the percent of the total capacity of the container occupied by the food.

In the case of a container with lid attached otherwise than by double seam, remove the lid and proceed as directed in clauses (2) to (6) inclusive, except that under clause (4), fill the container to the level of the top thereof.

Michigan Canners Association Spring Convention

The annual spring convention of the Michigan Canners Association will be held at the Park Place Hotel, Traverse City, Mich., on June 4, 5, and 6. Frank H. Raymond, secretary, has announced that this is to be one of the most important meetings ever held by the Association.

Annual Meeting of Chamber of Commerce May 1-4

In an effort to find "The Key to Recovery" of American business, practical answers to questions facing business will be brought before the twenty-seventh annual meeting of the Chamber of Commerce of the United States, May 1 through 4.

Second Recipe Pamphlet Issued by Service Kitchen

Copies of "Easy Recipes Using Canned Foods," featuring canned foods as ingredients in family-size dishes, have been mailed to members of the Association and to a list of home economists. Additional copies may be secured if they are desired.

This is the second of a series of pamphlets prepared and issued by the Service Kitchen of the Association's Home Economics Division. It follows the first of the series, "Every Day Recipes for Canned Foods," which was published in December. The new booklet is the same size as the first one, has the same cover design, but a different color and title have been used. Owing to the limited space for recipes, it is impossible to cover all canned products in each leaflet, but all products eventually will appear in the series.

In addition to developing recipes for the two family-size recipe publications, the Service Kitchen has developed and tested many recipes for label and promotional use of various members of the Association.

Woman Appreciates Inexpensive Recipes

A letter from a Massachusetts woman to the Home Economics Division says, "I particularly enjoy your recipes because they are not too expensive." The woman wrote in regard to the new Service Kitchen recipes, "Every Day Recipes for Canned Foods," and said "I have enjoyed it so much

I should appreciate being put on your mailing list so that I may be assured of securing the rest of the series when they are published."

Texas Grapefruit Quarantine Regulations

The season for harvesting grapefruit under the Mexican fruitfly quarantine regulations, which apply to the Texas counties of Brooks, Cameron, Hidalgo, and Willacy and part of Jim Wells county, has been extended to the close of May 15. The harvesting season normally closes under the quarantine on April 30.

In order to insure against spread of infestation all grapefruit harvested in the regulated area after April 11, 1939, must be sterilized in manner and by method approved by the chief of the Bureau of Entomology and Plant Quarantine.

The extension of the harvest season for grapefruit and the requirement of sterilization for such fruit harvested after April 11, 1939, was announced by the U. S. Department of Agriculture after consultation with the Texas State Department of Agriculture, and is concurred in by J. E. McDonald, commissioner of agriculture.

Campaign to Reduce Freight Loss and Damage

Efforts of agencies engaged in freight transportation are being directed during April, designated as the "Perfect Shipping Month," to reduce loss and damage to American goods. During the past 18 years, claims for loss and damage have been reduced more than \$108,000,000. Claims in 1920 amounted to \$120,000,000, but were reduced to \$22,000,000 in 1938.

Shippers, warehousemen, consignees, and carriers are co-operating during the month in a concerted effort to solve problems in the heavy traffic of freight. Attention is being centered during the month on such subjects as adequate packing, careful handling, methods of discovering the causes of concealed damage, loading and stowing methods of trucks and railroads, and analysis of damage to ascertain whether the fault lies with the shipper or the carrier.

California Fruit Agreement Tentatively Approved

Tentative approval of a marketing agreement for fresh Bartlett pears, plums, and Elberta peaches grown in California was announced April 13 by the U. S. Department of Agriculture.

Canned Fruit Industry in Australia

During the current season, the principal canning areas of Australia have experienced very hot, dry weather, with the result that yields of canning fruits will be greatly below those of the previous season, according to the American trade commissioner at Sydney.

According to the Australian Canned Fruits Board, carry-over stocks of canned fruits as of December 31, 1938, were as follows: Apricots, 47,363 cases (equivalent to 24 30-ounce cans); peaches, 198,719 cases; and pears, 131,055 cases. Of the total, 377,137 cases, 318,280 cases were unsold stocks.

February Canned Fish Market in Philippines

Arrivals during February in the Philippine Islands of canned fish from the United States totaled 6,900 cases of sardines, 1,400 cases of salmon, and 2,600 cases of mackerel, according to the American trade commissioner at Manila. From Japan came 4,800 cases of sardines and 1,000 cases of salmon.

There was a fair demand for American sardines and salmon, with supplies ample and arrivals low. Mackerel supplies are very low with demand small.

National Baby Week Scheduled May 1-6

National Baby Week will be held this year from May 1 to 6. A number of baby food canners and manufacturers are preparing special material for the drive.

M. I. T. Plans Food Technology Conference

A second Food Technology Conference is to be held at Massachusetts Institute of Technology, June 28-July 1 inclusive, after the close of the present academic year. The conference is sponsored by the Division of Food Technology in the Department of Biology and Public Health.

Among the principal themes of the Conference will be quality control and food engineering as they relate to the diversified food industries.

CONTENTS

	PAGE
Progress on Norton bill	5801
Lea introduces new bill	5801
Discussion of corn sugar deferred to May 1	5802
New State food and drug legislation	5802
Food import-export regulations promulgated	5802
Regional laboratories to study 12 products	5802
Fruit and vegetable market competition	5803
Stocks and shipments of pitted red cherries	5803
Vegetable pack statistics published	5803
Fruits and vegetables in cold storage	5803
Canning firms admitted to membership	5803
Unsold stocks of canned salmon on March 31	5804
Sweet corn for manufacture	5804
Prospects for canned corn for 1939	5805
Stocks and shipments of canned sweet corn	5806
Green and wax beans	5807
1939 prospects for green-wax beans	5807
Stocks and shipments of green and wax beans	5808
Report of hearings on tomatoes and tomato juice published	5808
Michigan Canners Association spring convention	5815
Annual meeting of Chamber of Commerce May 1-4	5815
Second recipe pamphlet issued by Service Kitchen	5815
Woman appreciates inexpensive recipes	5815
Texas grapefruit quarantine regulations	5816
Campaign to reduce freight loss and damage	5816
California fruit agreement tentatively approved	5816
Canned fruit industry in Australia	5816
February canned fish market in Philippines	5816
National Baby Week scheduled May 1-6	5816
M.I.T. plans food technology conference	5816